MQB7046: MODELLING PUBLIC HEALTH DATA

Semester 2, Session 2023/2024

CONTINUOUS ASSESSMENT 3

Please read the instructions carefully. Failure to comply with any of these instructions may result in penalty of marks or grading of this assessment.

1. This assignment represents 20% of the evaluation for this course.
2. Answer ALL questions in English.
3. This assignment is "open book," which means you are permitted to use any materials handed out in class, your own notes from the course and textbooks.
4. All analyses should be conducted using the Python software. All codes and outputs need to be interpreted.
5. Submission instructions:
   - For students found plagiarising or commit any forms of academic misconducts, they will be penalised and given a zero (fail).
   - Upload the following; 1) your jupyter notebook, 2) your dataset in a folder and upload in the SPeCTRUM
   - All documents must be named according to the Matrix_number
   - Submit your files via SPeCTRUM before the due date on **22/5/2022 11.59pm.** Failure to submit your assignment on the stated due date and time will be given a zero.

QUESTION:

A cross-sectional study was conducted among 560 participants aged 50 and above living in the community. During the survey, respondents were asked to indicate whether they experienced difficulties with a number of activities of daily living (ADLs). Additionally, sociodemographic data were collected during the interviews. A subset of the dataset (adl.csv) contains the following information:

Variable	Coding
age	age in years
male	male: 0=female, 1=male
adl	number of adl difficulties
pact	physical activity: 0= inactive, 1=active
limitill	limiting long standing illness: 0=no, 1= yes

Suppose you are interested in the association between physical activity and the number of difficulties with ADLs. Your hypothesis is that physically inactive individuals are associated with a greater number of difficulties. Carefully considering potential confounders of this association, adjust accordingly in your analysis.

Conduct any relevant analyses and write a report describing your analysis steps and summarizing your findings.